

# **The Army** **on the March.**

**Course In Organization and Tactics.**

**Lecture No. 6,**

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## THE ARMY ON THE MARCH

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Marches may be looked upon as the foundation of all operations. An army which, by comparison with other armies, is below the standard in marching powers, must be considered as lacking in one of the most essential qualities necessary for carrying on warfare, and which is now materially increased in proportion to the numerical size of modern armies. It is well known that no military performance is so often put to the test as that of marching. Placing aside outpost affairs, only a very few days are actually devoted to fighting, whereas nearly every one is a marching day as long as there is no suspension of hostilities.

The influence of marches over tactics and strategy is very great; indeed, logistics used to be placed on an equivalent footing to both, as a distinct and important branch of the science of war. It is quite evident that, as the success of strategy is mainly dependent upon accurate calculations of the powers of marching, the most brilliant conceptions, and the most profound combinations, must fail if the troops do not move over the distances calculated upon, and do not occupy the prescribed relative positions to each other. Similarly, when the head of a column is attacked, the most skillful tactics will not help it if the artillery, cavalry and infantry that are required for any particular action

cannot be found, if the roads are blocked, reinforcements cannot be brought up or the ammunition be gotten at. The mere fact of the punctual arrival at designated points of bodies of troops, in good condition for battle, may be of decisive importance.

Marches are executed in accordance with rules which vary with the military situation and the distance from the enemy. They are roughly divided into forward marches, retrograde marches, flank marches and retreats. Forward marches are further classified as follows: (a) Ordinary Marches, (b) Marches in Campaign, (c) March into Action, (d) Forced Marches, (e) Night Marches and (f) Practice Marches. This lecture will deal principally with forward marches in campaign, the whole subject being too wide an one to admit of a comprehensive discussion within so narrow a limit. Therefore, among other details, the following subjects cannot be even touched upon, viz : —Lines of Communication, Transportation by Railroads, Transportation by Steamboats, Forced Marches, Ordinary Marches, Marches into Action, Practice Marches, etc. These subjects! should be carefully considered, nevertheless, when a march is to be undertaken, especially in an enemy's country.

It appears to be unnecessary to dwell upon the methods of maintaining and enhancing the marching efficiency of troops; they are well known. But it may be wise to quote from Clarke who says:- "The secret of success in marches consists in husbanding the men's strengths in ordinary circumstances, so that at the critical moment they may be capable of extraordinary effort. "

Columns on the march are composed of the troops themselves, their light and regimental trains, the ammunition columns, the hospital trains, the provision and forage columns, the horse depots, and of such

other parks, trains and depots as may be required, depending upon the force..

Large bodies of cavalry should not form part of the same column with foot troops, save in emergencies. The difference in the rate of marching is very tiresome to cavalry and tends to produce sore backs.

The led horses and the prescribed vehicles or pack animals constitute the train of the troops, This is divided into the light train, which is required by the troops during an action, and the regimental train, which is not utilized until the command goes into camp or bivouac. The rations, forage and material of war consumed by the forces are replaced by drawing upon the supply trains. The ammunition columns, four for each corps, are in charge of trained officers and men. The provision columns, horse depots, etc., generally remain at a safe distance in rear and form a distinct column, or move in a succession of separate columns.

To guard against surprise without making undue demands upon the endurance of the soldiers, use is made of covering detachments; on the march the security of the army is thus provided for by means of advance guards, rear guards and flanking detachments. The safest plan is to find the enemy, never lose "touch" of his forces once obtained, rapidly report all his movements, and draw a veil, so to speak, around one's own. Cavalry alone can do this, and must therefore be thrown out both in advance and on both flanks. Further it is the duty of every commander to assail the enemy under circumstances most unfavorable to the latter and most advantageous to himself. The principle that thorough reconnaissance is the best protection requires that a force should push the bulk of its cavalry beyond the advance guard. It may either remain under the immediate command of the leader of the entire force

(as independent cavalry), or be attached to the advance guard. Its movement should be so regulated that, while fulfilling all its reconnaissance duties, it may never lose touch with its own infantry, but keep in a position to be always at hand when the force deploys to fight. Even after close touch with the enemy has been gained, the principal work of the divisional cavalry is still reconnaissance. Its tactical employment at a favorable opportunity is, however, not excluded by any means. Almost every one of the British reverses in South Africa can be ascribed to their being taken unawares by the enemy.

The protection duly arranged for, the other elements of the column march in the order demanded by the tactical situation.

The artillery, consisting of from three to four guns for every 1,000 men of the other arms of the service, should, as a rule, be well up towards the head, so its entrance into action may be expedited. However, for reasons of security, it should not form the leading element of the column. The arrival of the infantry must not be delayed by too large a mass of artillery near the head; and, also, the artillery should not be impeded by too large a force in its own immediate front. In the battle of Beaumont, (1870), the Bavarian Reserve Artillery, valuable as its assistance would have been, never came properly into action, for the reason that in the order of march it was placed at the tail of the column and thus, when it was ordered to the front, could not move with rapidity, since it had to pass the Second Infantry Division.

In the march of a corps on a single road, the batteries of the leading division, which are not with the advance guard, would ordinarily be well placed behind the leading regiment of the main body; the corps artillery in rear of the leading division; and

the batteries of the other divisions in rear of their leading brigades. If all the batteries of the leading division be in the advance guard, then the corps artillery may be pushed up nearer to the head of the column,

If the corps were moving on two roads, one division would march on one road and two divisions and the corps artillery on the other, unless instructions to the contrary were given. If moving on three roads, each division of the corps would march on one road and the corps artillery as directed by the corps commander,

The bulk of the artillery may be placed near the head of the main body if marching, on a single road, in a strategical pursuit, as in forcing a crossing or to intercept the enemy's march. On the other hand, if the corps be marching through long defiles, or heavy forests, or on night marches, the artillery might be placed at the tail of the column,

If it is possible to assign to cavalry and artillery roads of their own, and there is no reason why they should not get to the end of their day's march at an early hour, they may, by occasionally trotting (half or one-third of the total length of the march), without causing any fatigue to, but rather benefiting, their horses, accomplish the march in about two-thirds, or three-fifths, of the time taken by the infantry. But artillery should never be moved off the high roads without good reason and under no circumstance whatever should it be allowed to march for any distance separated from the other arms,

An army corps, (reckoned only as two divisions of infantry and the corps artillery), occupying some twelve and a half miles of road in column of route, and leaving for the time, all trains, etc., in the rear, would, when advancing by one road, require from twelve to twenty hours, according to circum-

stances, to march a distance of fourteen miles (one day's march) and deploy into line of battle. This,, then, at once gives about the maximum force that can be moved by one road (the troops, etc. , being at full war strength), if it is to immediately engage the enemy, or be drawn up in position ready for battle.

The following has been found to be the times taken to perform a march of about fourteen miles;

A battalion of infantry	A	B	C	D
or a field battery _____	5	8	10	12
A regiment of cavalry or a				
battery of horse artillery....	4	6	7 $\frac{1}{2}$	20
A train, etc., of a column _____	6	10	16	20
An infantry division _____	6	9	11	14
A cavalry division _____	4	7	9	12
Add for every additional				
infantry division on the				
same road.....-.....	1	2	3	4

(These figures represent only the time taken by the head of the column of route in question to cover the distance. )

Column "A", means on a good road under favorable conditions.

Column "B", on a bad road under favorable conditions.

Column "C", on a bad road under unfavorable conditions.

Column "D", under very unfavorable conditions.

A large force should move by as many roads, and on as broad a front, as the military situation will justify, provided always that the intervals between columns are not too great to allow of easy communication and reciprocal support. Owing to the increased power of local resistance, which is the consequence of modern improvements in firearms, these intervals may now be enlarged to an extent that would formerly have been unsafe,

It is essential to the success of an army's operations that it have good roads on which to march. Were this not so it would be impossible to supply the army with the necessities of life, And not only must these roads be good in the ordinary sense, but they must be great main arteries of the region, solidly constructed. The trains that follow an army, laden as they are with ammunition, pontoons, platforms for guns, siege artillery, and other ponderous material, soon destroy all but the best roads. The British experience in the Crimea shows that seven miles of soft soil, interposed in winter between an army and its depots, may prove a fatal obstacle. But it is not only on account of supplies that great armies operate by great roads. It is also because the march of the troops and artillery becomes on bad roads so slow and uncertain that all the calculations on which a general bases a combined operation are liable to be falsified, and the rapidity necessary for a movement intended to surprise or foil, an adversary is lost, so that the design is foreseen and' frustrated by the enemy.

In general, an army corps should march by divisions, one on each road, the advance and rear' guards of each being on the same road. "But one broad-principle should never be lost sight of, and that is-the division of a force into lateral columns is disadvantageous as regards deployment into line of battle if the distance between , the different heads of columns are together mu&greater than the total depth of the whole force if it **were** marching in one column."

An army should march by corps, one on each parallel road, and the strength of each column should not exceed 30,000 men. The size of the corps is practically the same throughout the armies of the world, A corps of this strength: forms, in ordinary



marching formation, a column about fifteen miles long, the infantry being in fours, the cavalry in twos and the guns and caissons in single file, The rear of the column is thus about a day's march behind the head, A greater strength would thus make the column so long that its head could be defeated before its rear could arrive on the field of battle,. Considerations of marching and deployment also render it undesirable to have a corps of smaller size, as the number of parallel roads within supporting distance is generally limited, and experience has shown that it is rarely practicable to march an army so as to have less than 30,000 men on one road, for, to reduce the size of the corps would necessitate the marching of two or more corps on the same road, which would only aggravate the evil, Moreover, the trains of the first corps must either precede the second corps or be separated from their own corps by it. Either situation is undesirable,

A division consists of—

- 3 brigades of infantry,.
- 1 regiment of cavalry.
- 6 batteries of field artillery,
- 3 batteries of horse artillery..
- 1 battalion of engineers.
- 1 company of signal corps-
- 4 field hospitals,
- 1 ammunition colum, composed of three sections of twenty-one wagons each for small arms ammunition, and two sections of twenty-one wagons each for artillery ammunition and stores,.
- 1 supply column, composed of three wagon trains of twenty-seven wagons each,.
- and
- 1 pack train,.

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A cavalry division consists of—

- 3 cavalry brigades,
- 6 batteries of horse artillery,
- 1 company of engineers, (mounted)
- 1 company of signal corps, (mounted)
- 1 ammunition column,
- 1 supply column, and
- 1 field hospital (with light transportation.)

The fighting strength of an army corps consists of two or three divisions, and the corps artillery. The latter is independent of the divisional artillery and is under the immediate orders of the chief of artillery of the corps. The corps artillery consists, usually, of at least two battalions of four batteries each, and all of these batteries should be horse artillery taken from the divisions. The cavalry corps consists of two or three divisions and at least six batteries of horse artillery; at full strength it numbers approximately 33,000 men.

The army would consist of not more than six army corps nor less than three, with one or more cavalry divisions. More than six corps form an unwieldy army, as shown in 1870 in case of the French "Army of the Rhine", and to a lesser degree by the German "Second Army," the former consisting of eight, and the latter of seven, army corps. An army of less than three corps is an inconvenient organization, as it is impossible to have a reserve in the hands of the army commander without breaking up the unity of one of the corps. When an army consists of less than the number requisite for three corps, it would be better organized with divisions as the highest unit. Siege artillery is assigned as required.

When troops march in parallel columns, sections of the country may be assigned to each column in which the roads and resources may be reserved to its exclusive use, but it is essential that a main road be

never named as a line of demarcation, nor, in fact, any road. Other features of the terrain should preferably be chosen for this line.

The order of brigades in the division, regiments in the brigades, battalions or squadrons in the regiment, and troops, companies or batteries in the squadron, battalion or group, should change in a column on the march from day to day, the unit at the head of the column one day, taking its place at the rear the next day, etc.

Every body of troops is accompanied by its light train which marches at the rear of the unit to which it belongs. However, it may be desirable to have the ammunition wagons assembled at the rear of the larger units, for example, the regiment, brigade or advance guard. When contact with the enemy is expected, the assembled regimental trains, arranged in the order of march of the troops, follow at sufficient distance in rear to avoid incurring any danger themselves or hampering the operations,

-When two or more divisions march on the same road, the dispositions of the trains will vary. Usually? in campaigns, in order that a portion of the supplies may be of easy access, the whole of the trains is divided into two parts. The components of the first part may march in rear of their divisions, but oftener at a distance of about seven miles in rear of the column. The second part is kept further to the rear and may be directed to go into park and await orders. When an engagement is confidently expected, some of the sections of the ammunition columns must be near enough to the troops to be able to replenish the supply during and immediately after the engagement. (In our service these ammunition columns would probably be composed of light escort wagons, for infantry and cavalry.) One of the field hospitals for each division should also be close at hand, if

possible ahead of the ammunition sections. The exigencies of war not infrequently require some of the field hospitals, which ordinarily accompany the fighting force, to remain, for the time, fixed. But the rule is that they must be mobile. So the wounded are, at the earliest practicable moment, evacuated along the lines of communication towards the base of operations. The regimental trains are not brought up until the close of the engagement,

The different units of the column, in the trains as well as in the troops, are separated at the start by distances prescribed by regulations, or by the commander. These distances are temporarily increased or diminished, according to circumstances, thus facilitating uniform progress without checks and with a continual tendency to a gradual resumption of normal distances.

#### FORMATION OF THE COLUMNS.

Infantry will usually march in column of fours, — in column of twos when necessary; cavalry in column of fours on good roads, or when a combat formation is desirable, otherwise in column of twos; artillery in column of sections, (single carriages); etc. On trails, other formations will have to be adopted, as may be the case when marching across country. Tactical considerations must always be considered. In exceptional cases it may be practicable, on broad highways, for cavalry and infantry to march in double column of fours, artillery and carriages in double column of carriages. The readiness of troops for deployment may also be increased by utilizing all the roads leading towards the front.

The troops should be directed to keep to the right side of the road, leaving the left free for circulation as far as practicable. When the roads are narrow space should still be given for single mounted men to pass freely up and down the column. If the roads

are soft with mud, or deep with sand, it may be advisable to divide the column longitudinally, thus permitting the men and animals to pick their way with better footing, and leave the middle of the road clear. The suffering from heat and dust may also be materially reduced by this method. But, whatever the widening of the column thus produced, increase of the length of road space occupied by any unit must not be permitted, for this would lead to straggling and lengthening of the column. The columns should always be kept closed up, and the elements in each should march in the order indicated by their relative importance in the impending action,

Communication with other columns should be maintained either by cavalry patrols or by cyclists, or by both. It may sometimes be expedient to detach a staff officer to march with an adjoining column. At halts changes may be made in the arrangement of the troops to facilitate deployment or participation in the engagement of adjoining columns.

Bugle calls are sounded only when necessary in campaign, and on the march through insurgent regions precautions must be taken for the safety of stragglers and of men left behind.

#### THE RATE AND LENGTH OF MARCHES.

The relations between time and space require the most careful consideration. The length occupied by a force in column of route on a road, must be known, as well as the time it takes to get over a given distance. Defiles that have to be passed must be carefully examined. Errors of judgment, or omissions in the application of these principles, are sure to be followed by the most serious consequences; for, independently of every kind of mishap that is thereby likely to occur, troops are generally harassed without any reasonable excuse by unnecessary early starts,

constant and unwished for halts on the march and such like occurrences.

The rate of progress of a mixed command is regulated by that of the foot troops. It varies with many conditions, but it is imperative that 'a uniform rate be maintained throughout the column. The officer who sets the pace at the head of the troops must bear in mind that the units in rear are at a disadvantage and that an irregular pace tends to produce alternate checking and hurrying, which is destructive of the condition and temper of the troops. When a change of pace is to be made warning must be sent to the subordinate commanders.

For infantry the rate prescribed is three miles per hour, while marching; only two and three-fourths miles per hour including halts. This is the maximum. Allowance must always be made for adverse conditions, the above being under favorable ones,

For long columns of mixed forces, including foot troops, the rate is from two and one-fourth to two and one-half miles per hour. A corps can only cover about two miles per hour, at the most.

For cavalry the usual marching gait is the walk, For forces larger than a squadron the rate will be about three and three-fourth miles per hour, while marching. Allowing for halts this would be from three and one-third to three and one-half miles per hour, for large forces. Ordinarily, the marching rate would be, after the first halt, about five miles an hour, alternating the walk and the trot, and occasionally dismounting and leading for short distances. Level ground is utilized for the trot. The periods for trot alternating with the walk should not, as a rule, exceed ten or fifteen minutes in duration, too frequent changes of gait are also undesirable.

For field artillery the habitual gait is the walk, three and one-half to three and three-fourths miles an

hour; in rapid marches the slow trot alternates with the walk.

Horse artillery adopts the rate of cavalry.

For wagon trains the rate varies. While large mules drawing light loads, on good roads, can do nearly four miles an hour, in long columns a rate of two miles per hour, including halts, is all that can be expected even under favorable circumstances,

The length of the average march for infantry, or for mixed commands consisting partly of foot troops, is fifteen miles per day, with a rest of at least one day each week. The first few days' march should always be comparatively short. This is found advisable even in maneuvers and will be more so in ease of war, as it is very desirable that the men should gradually get used to their field equipment, and especially to new clothing, shoes, straps, etc.

For a division of all arms, fifteen miles is a fair average march; fifteen to twenty miles a long march; and over twenty miles a forced march. A large army marching continuously seldom covers more than ten or eleven miles a day, measured on the map from point to point. The most rapid continuous march on record is that of Napoleon from the English Channel to the Rhine in 1805. Three 'Corps d'Armee' marched in three distinct lines, each corps marching by divisions at a day's interval. The average distance was four hundred miles and the time taken twenty-five days. This was at the rate of sixteen miles per day. In the Crown Prince's pursuit of McMahon's forces in August, 1870, the actual marches averaged from fifteen to twenty miles a day, and the troops were sometimes on the road from 4:00 A. M., to 8:00 P. M.

But circumstances alter cases. Napoleon's troops, trained marchers as they were, could only sometimes accomplish eight or nine miles in as many

hours, in the sands and mud of Poland. And in eastern countries the ability to obtain water is generally essential. Thus, during the Russian expedition to Khiva, in 1873, the marches were arranged from well to well and, consequently, the troops had to march distances of from twenty-four to twenty-seven miles in twenty-four hours; under intense heat and across a sandy, shadeless desert.

Small commands, under favorable circumstances, may make as much as twenty miles a day without any great effort but, in extensive operations, involving large bodies of troops, the average rate of progress will not exceed ten miles a day; field artillery marches fifteen to twenty miles a day; and cavalry, after men and horses are hardened, twenty-five miles a day. Wagon trains take about the same rate as infantry,

#### ROAD SPACES.

The normal distances, in the clear, between units' on route marches should be the same as those prescribed in "Drill Regulations" for troops marching at 'Attention.'

One of the most striking lessons of the necessity of accurate calculation of time and space may be drawn from the march and retreat of the French army through Metz after the battle of Borgny, 1870. The movement commenced on the 14th of August at 11:30 A. M., and was not completed until midnight of the 16th. It thus occupied sixty hours, although several roads had been utilized contrary to orders. It has been clearly shown that, if the movement had been properly planned, the whole force might have been concentrated, in position, on the Gravelotte plateau on the evening of the 15th., (about thirty-five hours later), and the army would thus have been in a most favorable position to take the offensive on the follow-



ing day. This is an example of errors in calculations -and the result.

For approximate calculations of road space we may make the following assumptions :

For foot troop; -two men to the yard.

For mounted troops--one man to the yard.

For each gun, wagon or caisson -twenty yards.

A given point is passed in one minute by

175 infantry, in column of fours, at a walk,

110 cavalry, in column of fours, at a walk,

75 cavalry, in column of fours, in rear of infantry,

200 cavalry, in column of fours, at a trot,

5 guns, or caissons.

For troops at war strength (which please note) , the road spaces, including distances, will be about as follows:

ORGANIZATION.	YARDS.
Company,	60
Battalion,	250
With regimental train,	325
Regiment,	800
With regimental train,	1050
Troop,	100
Squadron,	450
With regimental train,	600
Regiment, (Cav.)	1300
With regimental train,	1850
Battery, field artillery,	350
With regimental train,	400
Infantry brigade,	2500
With regimental train,	3400
Division, (part of corps),	12000
	MILES.
Division, with all trains,	11
Cavalry division, complete,	10
Army corps, with all its auxiliary troops and trains,	35

NOTE:—An approximate estimate of the total transportation of a corps, exclusive of the wagons and caissons attached to the batteries gives 1,086 wagons.

These spaces are only slightly greater than the requirements of Drill Regulations. Corresponding corrections must be made for organizations at peace strength. In calculating the length of a column further allowance must be made for elongation -- sometimes as much as 25 per cent. An increased distance between units at the start will generally diminish subsequent lengthening of the column.

### DETAILS OF A MARCH.

After marching from half to three-quarters of an hour the troops are halted for fifteen minutes. After this there should be a halt of ten minutes every hour, that is the troops march fifty minutes and rest ten. In very hot weather it may be necessary to make the halts more frequent and longer; in good weather, with favorable temperature, long halts will not be desirable for marches of less than about 15 miles for infantry and 25 miles for cavalry. When the day's march is to run into the afternoon a 'halt of one hour at noon will often be of advantage. Staff officers should be sent ahead to find a suitable place for this halt, and notification of the proposed length of the halt must be circulated. In long columns it will be necessary to make arrangements so that the march of organizations shall not be impeded by halts of those preceding them. In the cavalry the hourly halts are five minutes; in the field artillery they are from five to ten minutes.

Every precaution must be taken to prevent interruption of the steady progress of the troops in rear. If the distances are not sufficient to prevent cheeks, units should be allowed to overlap; streams and similar obstacles must be crossed at several places at the same time; and, while passing through short defiles, the pace should be accelerated and the exit cleared at once. Before attempting to cross obstacles, or tra-

verse defiles, with troops, careful examination should be made of the fords, boggy places, bridges of doubtful character, or the ice, as the case may be. Roads leading through swamps or quicksands, or across streams with treacherous bottoms, must have their limits marked by stakes or bushes; or warning may be placed at the dangerous spots only. At night, lanterns must be hung from the stakes and a fire be built at the landing, or else a lantern be displayed there.

The crossing of a military bridge must not begin before the Engineer Officer in charge announces that it is open for use. Mounted soldiers and men on wagons must dismount, except those on wheel horses; and animals are led with the men on the outside of the column. Foot troops must be required to "break step." An officer at the entrance stops the column as soon as he observes a check on the bridge. If a horse should fall into the water it is turned loose.

Every unit, as soon as it has passed the bridge, clears the exit by taking a quicker step, or by turning off from the road. Before cavalry and artillery halt to remount they must leave the main road entirely free for troops that follow them. A mounted officer must be stationed about one hundred yards from the entrance to the bridge to see that the troops take up the proper formation before passing over and that they follow each other without any unnecessary loss of time.

When practicable, fords should be passed first by infantry, then by artillery and trains and lastly by cavalry. If the fords are at all difficult they will cause much delay to the army crossing them, and so additional ones must be looked for in spite of denial of their existence by neighboring inhabitants. The crossing of many animals may so deepen a ford as to render it impassable. The depth of a ford with rapid current should not exceed the following:

'For cavalry, four feet; for infantry, three feet; for artillery, two and one-half feet; for wagons, two and one-half feet, In sluggish water this may be increased six inches for cavalry and infantry, and three inches for artillery.

The bearing strength of ice is as follows:--For small groups of men, three inches; for cavalry and light guns, four and one-half to seven inches; for heavy guns, eight to twelve inches.

The formation of the troops would have to be varied according to the thickness and solidity of the ice.

In crossing streams on ferries the men enter a pontoon or barge singly at the bow, and gradually move towards the stern; larger vessels may be entered in column of twos. The men must retain the places assigned to them so that the handling of the ferry may not be interfered with. In small boats they must be required to remove their equipments and sit down. Horses are led onto the ferry one at a time; guns, caissons and wagons are loaded by hand, the teams being sent on the same vessel if practicable. Unloading is also from the bow, in good order and without any crowding. These requirements are essential.

Where rafts are used special precautions are necessary. The center of the raft is first occupied, to preserve the balance, and then the load is uniformly distributed. Unloading is carried on in inverse order. If beef cattle are to be crossed, it will be better to swim them.

When a cause of delay, for example, a damaged bridge, is met with, the commanders of all the units in the column should at once be notified of the minimum length of delay. This will allow the men to rest, and keep their tempers.

On the march the company commander goes where

his presence may be necessary; his usual place is at the head of his company, (in cavalry at the head of his troop,) but he should frequently allow it to pass him, in order to observe the condition of his men. No man must be allowed to leave the ranks without the permission of his company, or troop, commander, or by authority of some higher commander. In every such case he should be given a pass showing his name, company and regiment, and signed by the officer granting permission for him to fall out. This pass eventually reaches the surgeon, who returns it showing what disposition has been made of the man.

Brigadier General Thomas H. Barry, U. S. Army, in his annual report for the current year, makes the recommendation that all captains of infantry be mounted. Without intending to appear prejudiced in favor of this recommendation, I still must regard it as an excellent one; and not only for the benefit which the Service at large would derive from such a measure, but also from the fact that the enlisted personnel would be made more comfortable, more satisfied and more efficient in many respects, and especially so during a campaign, or on a march of any length. After a hard day's march, when everyone is utterly tired out, the company commander has yet many duties to perform. These are of the utmost importance to the efficiency of his command and, unless he be comparatively fresh himself, his men are liable to suffer as a consequence. This is especially the case during a march, when the company commander's duty may take him many times up and down the column.

One of the greatest sources of hardship for troops, and primarily for infantry, is hot weather. The best way to counteract its effect, and prevent heat-stroke, is found in the proper use of drinking water. Men who perspire a great deal must have

water to replenish their systems, but its excessive use is dangerous. The consumption of drinking water is largely a matter of personal habit; under ordinary circumstances a canteen' full should last a man a whole day. Many men do not drink at all during the march. So all soldiers should be trained -to an economical use of the liquid and to keeping a small reserve supply until an opportunity comes to replenish it. This training is of special value when water is scarce or infected with harmful bacteria. In certain cases the advance guard of the army may require inhabitants to place water in suitable vessels along the route for the convenient use of the troops as they pass by. In some cases wagons may have to be used to carry the water.

In commands larger than a brigade, a provost marshal is generally provided and is furnished with a proper force to ensure the efficient police of the column and of the camp, or of such portions of the same as may be assigned to him to care for.

As regards the hour for starting in the Tropics, or in midsummer, it will often be best to commence the march quite early, in order to avoid the heat in the middle of the day. When a rather long march is to be made under such circumstances, the command might rest for three or four hours during the hottest part of the day, and then finish the march in the evening. The nature of the means of transportation may be such as to render this unavoidable.

Halts should not be made in or near towns or villages unless it is necessary to secure water or supplies. At long halts the various bands should be required to play.

When wagons break down, or are stalled, the load is transferred to other wagons and the road cleared as soon as possible. The baggage of the headquarters office and that of the telegraph material

should be pushed forward even if other wagons have to be unloaded for that purpose.

A crossing in the lines of march must not lead to a crossing of the columns on the march, This is a matter to which attention cannot too strongly be drawn. But, although considerations of a higher nature may sometimes apparently render the crossing of columns unavoidable, this would be a very rare occurrence and would often indicate that, all due care to prevent such a cause of delay had not been taken by the commander responsible. And so we see that the depth occupied by a column on the march is a great disadvantage. It tells very much when columns have to cross each other, for the time lost by one column varies directly with the depth occupied by the other.

#### NIGHT MARCHES.

Von der Goltz says that the conventional dread of night marches, which causes them now to be looked upon as a sort of mortal sin, in a military sense, must be eradicated. In future wars, when great masses have to be moved in a small space, several army corps being obliged to follow one road, we shall not be able to dispense with night marches,

In the Russo-Japanese war newspaper reports, not always reliable of course, indicate that night marches are being used extensively, especially to move large bodies into position secretly. Some cases have been mentioned where it is claimed that actual fighting has taken place on a large scale during the night. In the light of the British experiences in South Africa, however, a close observer would feel inclined to doubt this last assertion

In southern latitudes, or in very hot weather, it may be desirable to make the whole, or at least a part of the march at night. In order to attack the enemy at night, or, as is more frequently the case,

to place the troops in a favorable position for an attack at dawn, night marches will often have to be resorted to. An emergency may require the beginning of a march at any time, day or night; and forced marches, as is well known, may extend into or even through the night. As an example of this, it is claimed that just prior to the battle of Liao Yang an entire Japanese army corps made a forced march of nearly forty-eight hours, with few halts, while placing their troops in position on the Russian flank.

In these marches it is of the utmost importance that the command remain on the right road, and that contact be not lost between units composing the column.

As far as possible such arrangements should be made in the afternoon before the march as will assist officers in maintaining the proper direction at night. The best available guides should be secured and assigned to several different parts of the column. The rate of marching must be reduced, the units kept closed up and company commanders held responsible that touch with the preceding units is maintained. At turning points in the road men are left behind to show the new direction. Field musicians may, and should, be distributed along the column to ensure the prompt repetition of signals in case of surprise by the enemy.

In passing through a town special caution must be taken to avoid going astray at the many turns in the street. The advance guard should cause lights to be displayed in the windows, or lanterns to be hung out along the line of march. In wagon trains the lanterns may have to be lighted on very dark nights and the drivers may be required to walk in order to keep awake. A wagon-master, with a lantern should precede the leading wagon by about twenty-five yards. On long marches it will always



be very difficult to keep the men awake; efforts should therefore be made to prevent them from sitting or lying down.

When the march is to be a secret one additional precautions will be necessary. The command will, in many cases, have to leave the roads, and progress will be slow as the troops will be obliged to feel their way. Absolute silence must prevail in the column. Mouth-pieces of bugles are removed, and tin cups and other articles of equipment are wrapped up or secured so as to prevent rattling. The men must not be permitted to smoke; such lights may be seen from a long distance. Villages and farmhouses should be avoided, especially in the Philippines, and even isolated houses and huts, owing to the warnings given by dogs and other animals.

I will conclude this lecture with an example of a successful night march and attack made by Lord Wolseley in Egypt, in 1882. He broke camp at Kassassin, made a night march of twelve miles with a force of 14,000 men, and halted within 1,000 yards of the Egyptian position at Tel-el-Kebir, without having encountered a single sentinel or patrol. The dispositions for attack were completed without being perceived by the enemy, and in the gray of the morning the assault was made. The attacking troops were within 800 yards of the works before the defenders gave any sign of life, and a rapid and vigorous assault was crowned with the most complete success.

It is believed that night marches, from now on, will be absolutely essential to the tactics and success of every army engaged in active warfare against an enemy, and that they will play a more important part than ever before in the movement of large bodies of troops in the immediate theater of operations.

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RAYMOND SHELDON,

*Captain 18th Infantry.*

**December 1st, 1904.**

## ORDER OF MARCH OF A DIVISION ACTING ALONE.

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### INDEPENDENT CAVALRY.

- 2 squadrons of cavalry.
- 1 battery of horse artillery.

### ADVANCE PARTY.

- 1 troop of cavalry.
- 4 members mounted signal detachment\*

### SUPPORT.

- Two and one half troops of cavalry.
- 4 members mounted signal detachment.
- 2 battalions of infantry.
- 1 platoon of engineers (with tool wagon).
- 1 machine gun detachment (probably).
- Infantry ammunition wagoos.

### RESERVE ,

- 1 platoon of cavalry.
- 1 platoon signal corps, (less one squad), 1 squad mounted,
- 1 battalion of infantry.
- 1 battery light field artillery.
- 1 regiment of infantry.
- 3 escort wagons (picks, shovels, axes, etc.),
- 1 platoon of engineers.
- Infantry ammunition Wagons,
- 1 ambulanoe company section,

### MAIN BODY,

- 1 platoon of cavalry.
- 1 platoon signal corps (one squad mounted),
- 1 regiment of infantry.
- Infantry ammunition wagons.
- 2 batteries horse artillery.
- 3 batteries light field artillery.
- 1 brigade of infantry.
- Infantry ammunition wagons.
- 1 field hospital (less one ambulance company section),
- 2 batteries of light field artillery.
- 1 company of engineers,

2 regiments of infantry.  
Infantry ammunition wagons.  
2 companies of engineers,  
2 field hospitals,  
Engineers' bridge train.  
The ammunition column (five sections) .  
The pack train,

REAR GUARD.

1 regiment of infantry.

AT ONE DAY'S MARCH IN REAR.

The supply column.  
1 field hospital.

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For the arrangement of the hospitals in this division I am indebted to  
Lieut. Colonel J. Van R. Hoff, Deputy Surgeon General, U. S. A., *Instructor*  
in the Department of Military Hygiene, Infantry and Cavalry School,

## QUESTION SHEET

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### ***Lecture No. 6.***

- 1, How are marches roughly divided?
2. State the composition of columns on 'the march.
3. State the difference between the light and the regimental trains of a column on the march.
4. How is the protection of the column provided for?
5. Where should the cavalry march, and why?
- 6, Where should the artillery march, and why?
7. When should cavalry and artillery be assigned roads of their own?
8. How long would it take an army corps to march 14 miles and deploy into line of battle?
9. By how many roads should a large force move? Explain
- IO. Why should an army have good roads on which to march?
11. In general how should an army corps march?
12. Explain how an army would march.
13. Why should each column not exceed 30,000 men?
14. Why should each column not be less than 30,000 men?
15. What is the fighting strength of an army corps?
16. Explain why there is a limit to the number of corps, in an army.
17. When two or more divisions march on the same road , describe the dispositions of the trains.
18. On which side of the road should the troops march, and why? What must not be permitted in this connection?
19. In calculating the rate of marches, why must the length occupied by a force in column of route on a road be known,, as well as the time it takes to cover a given distance?
20. Why should a uniform rate of marching be maintained?
21. What is the rate of march for each arm and for trains?
22. State the average length of a day's march for infantry and explain how a long march should be regulated.
23. What is the length of a day's march for the other arms, for trains, for a division of all arms and for an army?

24. How many men to the yard are assumed in making calculations of road space occupied?

25. By how many troops of each arm is a given point passed in one minute?

26. What is the length of road space occupied by an army corps, if marching on one road with all its auxiliary troops and trains?

27. Explain what halts are made on a march.

28. What precautions must be taken to prevent interruption of the steady progress of the troops in rear of the leading unit of a column?

29. Describe how a military bridge is crossed,

30. What would be the depth of fords to be used by troops, and how are they passed?

31. How thick must ice be to permit of troops crossing a frozen stream?

32. What is one of the greatest sources of hardship for troops on the march, and what is the best way to counteract its effects?

33. When wagons break down on the march, what should be done?

34. Should columns be permitted to cross on the march?

35. For what purposes will night marches often have to be resorted to?

36. What special precautions must be taken in passing through a town on a night march?

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